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| 09/986,721 | 11/09/2001 | Naoki Kubo | 0378-0385P | 5854 |

2292 7590 07/24/2006

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| EXAMINER |
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ROSARIO, DENNIS

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| ART UNIT | PAPER NUMBER |
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2624

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,721

Applicant(s)

KUBO, NAOKI

Examiner

Dennis Rosario

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/17/2006 Restriction Req.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/09/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 1-6 and 10-13, in the reply filed on 5/17/2006 is acknowledged.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. Japan 2000-343456, filed on 11/10/2000.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3, 6 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3, line 2 has the word "reproducible" which is not given patentable weight and is interpreted as an intended use.

Claim 6, lines 2-4 states:

"...the sub-step of reducing a number of quantizing bits of the broad-range image data sequentially from a lowermost bit..."

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This statement does not make sense. How can the lowermost bit be reduced to a plurality of bits? If this statement is true then the lowermost bit will be reduced to a fraction of the bit.

The examiner assumes that the applicant means:

I "...the sub-step of reducing a number of quantizing bits of the broad-range image data sequentially from a **plurality of** a lowermost bits..."

or

II "...the sub-step of reducing a number of quantizing bits of the broad-range image data sequentially from a lowermost **byte**..."

or

III "...the sub-step of reducing a number of quantizing bits of the broad-range image data sequentially from a lower-**bit data** ..."

So that the lowermost bits or byte say ABCD will be reduced to ABC or AB or A. Thus, the examiner will interpret claim 6 for the basis of claim interpretation under the above-mentioned assumptions.

Claim 13 is rejected for the same reasons as claim 6.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (US Patent 5,892,847 A).

Regarding claim 1, Johnson discloses a method of processing image data comprising the steps of:

a) transforming (via fig. 9, numerals 200,198 and unlabeled box between numerals 202 and 200) broad-range image data (fig. 9,num. 190) having a broad dynamic range to narrow-range image data (figures 9 and 10,num. 208) narrower in dynamic range than the broad-range image data (due to quantization);

b) inversely transforming (fig. 10, numerals 209 and 210) the narrow-range image data to thereby output inversely transformed image data (fig. 10, num. 211) having a same dynamic range (since the output of fig. 10,num. 211 is a reconstructed version) as the broad-range image data;

c) calculating difference data (fig. 10,num. 212) representative of a difference between the broad-range image data (figures 9 and 10,num. 190) and the inversely transformed image data (fig. 10, num. 211); and

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d) generating a file (fig. 4,num. 104) that relates the difference data (represented in fig. 22b, label "VQ1," under "PANEL 1," which is interpreted to be the claimed difference data since VQ1 is based on a "RESIDUAL" as shown in fig. 11,numerals 212 which in turn is a difference as shown in fig. 10,num. 212 that corresponds to an unlabeled subtraction symbol) to said step of transforming (represented in fig. 22b, under "PANEL 1" as "DCT") and the narrow-range image data (represented in fig. 22b as "PANEL 1") to one another (since the claimed difference data, VQ1, and the claimed transform step, DCT, include data that make up the claimed narrow-range image data, PANEL 1, which corresponds to "file segments...at the front of the file" in col. 4, lines 32,33 which corresponds a "good quality miniature" in col. 4, line 37 which is interpreted as the claimed "narrow-range image data").

Regarding claim 2 see fig. 1,numerals 104 and 106.

Regarding claim 3, Johnson discloses the method in accordance with claim 1, wherein the broad-range image data (the output of fig. 9,num. 198) is **reproducible** by adding the difference data to the inversely transformed image data.

Regarding claim 4, Johnson discloses the method in accordance with claim 1, wherein said step of transforming (fig. 9, unlabeled box between numerals 202 and 200) comprises:

- a) the sub-step of linearly transforming ("linearly quantizing" in col. 28, line 47) a number of quantizing levels of the broad range image data, and
- b) said step of inversely transforming comprises:

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b1) the sub-step of linearly, inversely transforming ("linear dequantization" in col. 28, lines 66,67) a number of quantizing levels of the narrow-range image data.

Regarding claim 5, Jonhson discloses the method in accordance with claim 1, wherein said step of transforming (via fig. 9, numerals 200,198 and unlabeled box between numerals 202 and 200) comprises:

a) the sub-step of nonlinearly transforming (via fig. 9,num. 198 transforms "each 8 X 8...block" in col. 11, line 49 where the transformation of a 8 X 8 block is interpreted as a non-linear transformation. Since fig. 9,num. 198 transforms a 2-dimensional image and not a 1-dimensional image.) a number of quantizing levels (fig. 9,num. 200) of the broad-range image data (fig. 9,num. 190), and

said step of inversely transforming (fig. 10, numerals 209 and 210) comprise:

b) the sub-step of nonlinearly, inversely transforming (fig. 10,num. 210 performs the same nonlinear transformation for the same reasons as in claim 5 a), above) a number of quantizing levels (fig. 10,num. 254) of the narrow-range image data (fig. 10,num. 208).

Claims 10,11 and 12 are rejected the same as claims 1,4 and 5. Thus, argument similar to that presented above for claims 1,4 and 5 of a method is equally applicable to claims 10,11 and 12,respectively, of an apparatus.

Allowable Subject Matter

6. Claims 6 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form, pending the 112 rejection, including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 6 and 13 are allowable because the prior art does not teach the limitation of adding zero bits to a lowermost quantizing bit of narrow range image data until the number of quantizing bits becomes equal to a number of quantizing bits of the broad range image data.

One prior art Manjunath et al. (US Patent 6,332,030 B1) teaches adding zeros to the least significant byte as shown in fig., num. 14. However such as feature is not within the environment of the parent claim.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gindele et al. (US Patent 6,775,407 B1) is pertinent as reducing a dynamic range, fig. 10,num. 250, creating a difference image, fig. 10,num. 204, and reconstructing an image using the difference image, fig. 10,num. 260a.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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